

IN THE CLAIMS

Please amend claims 7, 17, and 24 as follows.

67. (AMENDED) [The ACS of claim 1,] An audio

conference server (ACS) for enabling an application program to provide multi-point, weight controllable audio conferencing, the ACS comprising:

means for managing at least one audio conference, said at least one audio conference comprising a plurality of audio clients;

means for receiving audio data from said plurality of audio clients;

means for mixing said audio data to provide spatialized audio to said plurality of audio clients in said at least one audio conference,

wherein said mixing means includes means for providing distance-based attenuation according to sound decay characteristics, and

wherein said mixing means results in mixed audio data; and

means for delivering said mixed audio data to said plurality of audio clients in said at least one audio conference;

wherein said means for providing distance-based attenuation according to sound decay characteristics comprises:

means for identifying a decay factor from one of a plurality of pre-defined decay factors and a customized decay

factor for each of said plurality of audio clients, said plurality of pre-defined decay factors including

an audio big decay factor,  
an audio small decay factor,  
an audio medium decay factor, and  
a constant decay factor;

means for determining distances between a target audio client and a plurality of source audio clients;

means for determining a plurality of weighted values for each of said source audio clients based on said identified decay factor and said distance between each of said source audio clients and said target audio client, wherein each of said weighted values corresponds to a source/target audio client pair;

means for generating a mix table for each of said source/target audio client pairs;

means for calculating an actual mix for said target audio clients; and

means for refining said actual mix for said target audio clients.

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17. (AMENDED) [The method of claim 9,] A method for enabling an audio conference server (ACS) to provide an application program with multi-point, weight controllable audio conferencing, comprising:

(1) managing at least one audio conference, said at least one audio conference comprising a plurality of audio clients;

(2) receiving audio data from said plurality of audio clients;

(3) mixing said audio data to provide spatialized audio to said plurality of audio clients in said at least one audio conference,

wherein said mixing includes providing distance-based attenuation according to sound decay characteristics, and

wherein said mixing means results in mixed audio data; and

(4) delivering said mixed audio data to said plurality of audio clients in said at least one audio conference;

wherein providing distance-based attenuation according to sound decay characteristics comprises:

identifying a decay factor from one of a plurality of pre-defined decay factors and a customized decay factor for each of said plurality of audio clients, said plurality of pre-defined decay factors including

an audio big decay factor,  
an audio small decay factor,  
an audio medium decay factor, and  
a constant decay factor;

determining distances between a target audio client and a plurality of source audio clients;

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determining a plurality of weighted values for each of said source audio clients based on said identified decay factor and said distance between each of said source audio client and said target audio client, wherein each of said weighted values corresponds to a source/target audio client pair;

generating a mix table for each of said source/target audio client pairs;

calculating an actual mix for said target audio clients using said mix table; and

refining said actual mix for said target audio clients, wherein said refining step is used to avoid transmitting excess energy audio data, avoid the delivery of said audio data in a step-wise manner to a speaker output, avoid the performance of floating point multiplication, adapt the actual mix calculation for said target audio client to available CPU resources, select the nearest talking audio clients for the actual mix, and prepare stream audio for playing ambient background music or using an audio source forwarded from another conference.

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24. (AMENDED) [The computer program product of claim 18,] A computer program product comprising a computer useable medium having computer program logic recorded thereon for enabling an audio conference server (ACS) to provide an

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application program with multi-point, weight controllable audio conferencing, said computer program logic comprising:

means for enabling the computer to manage at least one audio conference, said at least one audio conference comprising a plurality of audio clients;

means for enabling the computer to receive audio data from said plurality of audio clients;

means for enabling the computer to mix said audio data to provide spatialized audio to said plurality of audio clients in said at least one audio conferences,

wherein said mixing means includes means for enabling the computer to provide distance-based attenuation according to sound decay characteristics, and

wherein said mixing means results in mixed audio data;  
and

means for enabling the computer to deliver said mixed audio data to said plurality of audio clients in said at least one audio conference;

wherein said means for enabling the computer to provide distance-based attenuation according to sound decay characteristics comprises:

means for enabling the computer to identify a decay factor from one of a plurality of pre-defined decay factors and a customized decay factor for each of said plurality of audio clients, said plurality of pre-defined decay factors including

an audio big decay factor,  
an audio small decay factor,  
an audio medium decay factor, and  
a constant decay factor;

means for enabling the computer to determine distances  
between a target audio client and a plurality of source audio  
clients;

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means for enabling the computer to determine a  
plurality of weighted values for each of said source audio  
clients based on said identified decay factor and said distance  
between said source audio client and said target audio client,  
wherein each of said weighted values corresponds to a  
source/target audio client pair;

means for enabling the computer to generate a mix table  
for each of said source/target audio client pairs;

means for enabling the computer to calculate an actual  
mix for said source audio clients; and

means for enabling the computer to refine said actual  
mix for said source audio clients.

REQUEST TO WITHDRAW FINALITY OF OFFICE ACTION

Applicant submits that the office action of July 7,  
1999 was made final prematurely. The Examiner states that the  
amendment dated April 9, 1999 necessitated a new ground of  
rejection. See MPEP 706.07(a). However, the amendment did not

necessitate a new ground of rejection because independent claims 1, 9 and 18 were amended to include the subject matters of cancelled claims 2, 10, and 19, respectively. By way of example, amended claim 1 is identical to original (now cancelled) claim 2, which the Examiner already had examined and rejected in the office action dated October 27, 1998 as being obvious in view of Bruno et. al (US Patent No. 5,710,591), Braun (US Patent No. 4,360,827), and Helf et. al (US Patent No. 5,550,924). Accordingly, because the Examiner had previously considered and rejected claim 2, the new grounds of rejection in the office action of July 7, 1999, was not "necessitated by Applicant's amendment of the claims." Rather, apparently the Examiner was persuaded by the remarks accompanying the amendment. In view of the foregoing, it is submitted that MPEP 706.07(a) requires the Examiner to withdraw the finality of the office action mailed July 7, 1999.

REMARKS

In view of the foregoing amendments and the following remarks, reconsideration and allowance of this application are requested. The Examiner's indication that claims 7, 8, 17, 24, and 25 recite allowable subject matter is acknowledged with appreciation. In view of this, applicant has amended claims 7, 17, and 24 into independent form. Claims 8 and 25 depend from